

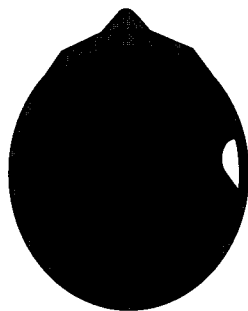
# EEG BRAIN MAPPING OF THE HEMI-SYNC PROCESS

The Hemi-Sync process is a patented auditory guidance technology based on the natural functioning of the brain. Originally developed by Robert A. Monroe and continuously being improved through research at the Monroe Institute, Hemi-Sync employs a blended and sequenced series of binaural sound pulses to induce a Frequency-Following Response in the human brain. Hemi-Sync alters EEG brain-wave patterns and generates expanded states of consciousness, what researchers call "dissociative" and "transcendent" states. When experiencing a dissociative state, an individual perceives nonphysical phenomena as constituting his or her whole field of awareness, like a dream.

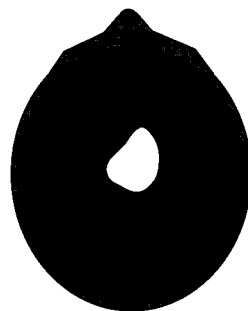
Additionally, during a dissociative-state experience, there is no impression of being "normally" in the physical body, because the physical body itself is either asleep or fully entranced. In electroencephalographic brain mapping, the shift from normal waking consciousness into a dissociative state is evidenced by a change in amplitude, frequency, and locale of predominant brain waves.

The waking state is characterized by alpha and beta (8-30 hertz) brain waves. Alpha brain-wave activity confined to the cortex behind the Sylvian sulcus (the back of the head) is known as "resting-state alpha." The dissociative state is characterized by elevated amplitude, synchronous slow-wave delta and theta (0-8 hertz), and the suppression of the alpha and beta activity established in the waking state. As one moves toward a dissociative-state experience, resting-state alpha activity is suppressed and replaced by synchronous slow-wave activity in the median of the central cortex (top of the head).

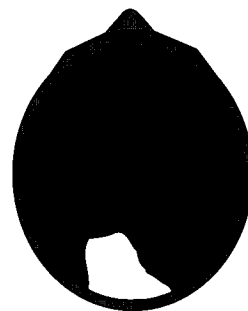
Beyond dissociation, there is transcendence. An experience in a transcendent state can be defined as being outside the normal limits of one's ego and the personal unconscious mind, into a universal awareness. Experiences in this state are many times ineffable and cannot be explained or described in mere words. In terms of EEG brain mapping, the shift from a dissociative state into transcendence is evidenced by further changes in amplitude, frequency, and locale of predominant



**Transcendent state:**  
**"Seeing" beyond the limits**  
**of normal perception**  
**into universal awareness—**  
**ineffable, profound.**



**Dissociative state:**  
**When consciousness shuts**  
**down, the body is**  
**asleep or in a meditative**  
**state—like in a dream.**



**Resting-state alpha:**  
**Sylvian sulcus shows and**  
**tells all—from the**  
**way we process reality to**  
**our temperaments.**



brain waves. The transcendent state is characterized by "resting-state alpha" and relatively high-amplitude, synchronous slow-wave activity in the median of the central cortex accompanied by regional (commonly temporal) gamma (30-hertz-plus) brain-wave activity.

The characteristic EEG parameters of resting-state alpha reveal an individual's temperament, the customary way in which an individual processes and interacts with the world he or she perceives. The suppression of this alpha activity frees one to perceive nonphysical energies outside the confines of physical-law belief systems. The ability to modify resting-state alpha directly affects one's experience of his or her environment. Changing or suppressing ones' resting-state alpha effectively transforms the person's perceptual venue, or concept of reality.

Hemi-Sync generates an audioencephalographic interferometric effect which can be used to transform or suppress innate resting-state alpha and stimulate alternative brain-wave patterns necessary for dissociative- and transcendent-state experiences. Some "Focus Level" Hemi-Sync frequencies used do not interfere with resting-state alpha and allow the listener to integrate and relate to "tape experiences" in his or her everyday, familiar life. Other Hemi-Sync frequencies modify or suppress resting-state alpha to provide listeners with hi-fidelity, rich Focus Level dissociative states and transcendent experiences.

With the advent of modern computerized EEG brain mapping, objective EEG evidence of the effect of the Hemi-Sync process has been established. The lower auditory centers of the brain provide the neural pathways for the propagation of binaural beats. It is there, in each hemisphere's olivary nucleus, deep inside the brain, that beat-frequency oscillations can be measured directly. At the cortex, the site of EEG brain-mapping electrodes, these original binaural frequencies can only be observed as having been integrated with prevailing electroneural activity. It is the brain-wave entrainment which occurs during this integration process that accounts for the effectiveness of the Hemi-Sync sound patterns.—F. Holmes Atwater